

TRW

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Attention: Mr. Edward W. Crump, Code 430

Subject: Monthly Progress Report for Period Ending 1 April 1973

Contract: ERTS Image Data Compression Technique Evaluation  
MMC #153

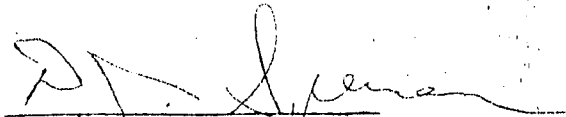
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Approval of the Data Analysis Plan was received by TRW on 28 March, 1973, and the investigation was started according to the plan. The schedule developed entails the processing and analysis of three subscenes per week for a total period of ten weeks. Following this period, the selected full scenes will be processed with certain scenes showing the effects of channel errors on essentially information preserving data reconstruction. Photographic imagery of this reconstructed data will be generated and supplied to NASA together with the corresponding compressed and reconstructed digital tapes. Delivery of the OPTRONICS filmwriter to TRW is scheduled for the last two weeks of April.

During the last week of March three subscenes of MSS tape 1015-17440, the Imperial Valley of California, were processed with the following results:

Subscene Class	SSDI	SSDIA	SSDIAM	SHELL
1. Agriculture	3.75	3.49	2.99	3.85
2. Mountains	3.45	3.02	2.54	3.44
3. Desert	2.75	2.51	2.07	2.95

The Shell, SSDI, and the SSDIA algorithms are strictly information preserving while the SSDIAM permits a distortion in the reconstructed image of one quantization level. Huffman encoding was used with the SSDI, SSDIAM, and Shell with Rice encoding used for the SSDIA (in the results presented above).

  
Donald J. Spencer

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